

baseline costs, while switchers to an SNRI had a \$254 reduction. However, switchers to a generic SSRI had a \$99 increase in medical costs. Controlling for baseline characteristics, escitalopram switchers had the highest total health care cost reduction of the three groups, with \$383 ( $P = 0.016$ ) in savings relative to SNRI switchers and \$172 ( $P = 0.276$ ) in savings relative to switchers to a generic SSRI. **CONCLUSIONS:** MDD patients requiring second line therapy who switched to escitalopram had significantly lower urgent care utilization than patients switching to an SNRI or another generic SSRI. Using escitalopram as second-line therapy appears to be a cost saving strategy compared to using SNRIs or generic SSRIs.

PMH20

#### RETROSPECTIVE COHORT STUDY OF THE EFFECTS OF EARLY VERSUS LATE TREATMENT OF INSOMNIA IN PATIENTS INITIATING ANTI-DEPRESSANT MEDICATIONS

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**OBJECTIVES:** Antidepressants may alleviate insomnia in depressed patients. The effects of antidepressants may be delayed, however, with potentially adverse effects on compliance and persistence, health care costs, and work loss. We sought to assess whether early treatment of insomnia improves outcomes and reduces costs in patients initiating antidepressants. **METHODS:** Retrospective cohort study of persons initiating anti-insomnia medications  $\leq 1$  year after initiating antidepressants in health-insurance claims database ( $>50$  million members covered by large US employers, years 2002–2006). Patients initiating anti-insomnia medications  $\leq 3$  weeks after initiation of antidepressants (“early treatment”) were matched to patients initiating anti-insomnia medications 3–52 weeks after initiation of antidepressants (“late treatment”) based on propensity scores and other baseline characteristics and compared in terms of compliance, therapy switching, health care utilization and costs, and days and employer costs of paid absences during 1 year follow-up. **RESULTS:** Early and late-treated patients ( $n = 4976$  pairs) were well matched on baseline characteristics including age (both 44 years,  $p = .5696$ ), sex (34% and 35%,  $p = .3523$ ), class of initial anti-depressant (SSRIs 77% for both), comorbidities, and pre-index health care utilization and costs. Compared with those receiving late treatment with anti-insomnia medications, those receiving early treatment were less likely to switch antidepressants (30% vs. 40%,  $p < .0001$ ), had fewer physicians office visits (mean [SD] 8.5 [9.7] vs. 9.9 [10.2],  $p < .0001$ ), were less likely to have hospitalizations/emergency department visits (34% vs. 39%,  $p < .0001$ ), and had lower health care costs during follow-up (mean [SD] \$9,152 [\$24,769] vs. \$10,587 [\$22,078],  $p = 0.0020$ ). Among patients with paid absence data ( $n = 56$  pairs), early treated patients had fewer paid absence hours (mean [SD] 153 [107] vs. 254 [317],  $p = 0.0322$ ) and lower employer paid absence costs (mean [SD] \$3780 [\$2669] vs. \$6296 [\$7893],  $p = 0.0328$ ). **CONCLUSIONS:** Early and appropriate treatment for insomnia may reduce frequency of switching of antidepressant therapy and lower health care and employer costs.

PMH21

#### COST-EFFECTIVENESS OF OLANZAPINE LONG-ACTING INJECTION IN THE TREATMENT OF NON-ADHERENCE PATIENTS WITH SCHIZOPHRENIA IN THE UNITED STATES

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**OBJECTIVES:** This study examines, from a U.S. health care perspective, the cost-effectiveness of olanzapine long-acting injection (OLAI) compared to risperidone long-acting injection, haloperidol decanoate, and oral olanzapine in the treatment of schizophrenia patients who are nonadherent with oral antipsychotics. **METHODS:** A 1-year microsimulation economic decision model was developed to simulate the dynamic usual care of schizophrenia patients who may switch, continue, discontinue, and restart medications. The model captures clinical and cost parameters including adherence levels, relapse with and without hospitalization, quality adjusted life years (QALYs), treatment discontinuation by reason, treatment-emergent adverse events, suicide, health care resource utilization, and direct medical care costs. Published medical literature, unpublished data, and a clinical expert panel were used to develop baseline model assumptions. Key model outcomes included annual total direct cost per treatment, cost per stable patient, and incremental cost-effectiveness values per 1 QALY gained. **RESULTS:** OLAI was found to have an incremental cost of \$60,273/QALY over haloperidol decanoate. OLAI dominated all other comparators by producing more QALYs and fewer inpatient relapses (dominant over RLAI) or by producing more QALYs and fewer inpatient relapses with a lower incremental cost-effectiveness ratio (extended dominance over oral olanzapine). The base case and multiple sensitivity analyses found OLAI to be a cost-effective option in terms of incremental cost/QALY gained. Results were most sensitive to change in the cost of relapse. **CONCLUSIONS:** OLAI is projected in this microsimulation model to be a cost-effective treatment option for a costly, complex, and challenging group of patients – nonadherent schizophrenia patients – by yielding more QALYs and fewer inpatient relapses than each comparator and providing a cost-effective option in terms of incremental cost per QALY gained.

PMH22

#### ECONOMIC EVALUATION OF AGOMELATINE FOR MAJOR DEPRESSIVE DISORDER IN SWEDEN

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**OBJECTIVES:** Agomelatine is the first melatonergic antidepressant approved by the European Medicine Agency for the treatment of major depressive disorder (MDD) in adults. The objective of our study was to perform a cost-effectiveness analysis for agomelatine based on clinical trials against placebo and venlafaxine from a Swedish societal perspective. **METHODS:** We developed a Markov model with health states for well, depressive episode, remission and death. The model also incorporated sleep disorders, discontinuation rates, discontinuation symptoms and adverse drug reactions (incl. constipation, diarrhoea, dyspepsia, headache, nausea, somnolence and sexual dysfunction). The time horizon was set to two years. Relapse and discontinuation rates were estimated using Weibull regressions, while remission rates were estimated directly. Costs and utilities for different health states were taken from a Swedish observational study. Frequencies of adverse events, sleep disorders and discontinuation symptoms were taken from three relevant trials, while costs and disutilities were estimated from the literature. Costs (reported in EUR 2008) and effects were discounted at 3% per year. **RESULTS:** In the base case, agomelatine is cost-saving and more effective than venlafaxine and placebo. One-way sensitivity analyses showed that the results were robust to most parameter changes. At a willingness-to-pay threshold of €50,000 per quality-adjusted life year gained, agomelatine was cost-effective compared to venlafaxine in 96% of the cases in the probabilistic sensitivity analysis. **CONCLUSIONS:** Based on data from clinical trials and the literature, our results indicate that agomelatine is cost-saving and more effective than venlafaxine in treating MDD in Sweden. These results are robust, confirmed by sensitivity analysis.

PMH23

#### PREGABALIN FOR THE TREATMENT OF GENERALIZED ANXIETY DISORDERS (GAD) – A COST-EFFECTIVENESS CASE STUDY OF MEXICO

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**OBJECTIVES:** Of the various subtypes of anxiety disorders, generalized anxiety disorder (GAD) is the most frequent, lifetime prevalence 6.2%, and is connected with relevant economic and societal consequences. The aim of this study was to assess the cost-effectiveness of pregabalin in the treatment of GAD from an institutional perspective. **METHODS:** We developed a three-state Markov model to simulate health and economic outcomes during a time horizon of one-year (12-week cycles). The model includes several stages related to disability (complete response, partial response and relapse). Effectiveness was assumed as the percentage of patients with complete response at the end of the follow-up period using the Hamilton Anxiety Rating Scale (HAM-A) (50% reduction related to baseline score) and a Clinical Global Impression of Improvement (CGI-I) score of 1 or 2. Transition probabilities were obtained from a meta-analysis involving international published trials. Comparators used in the assessment were paroxetine (10–40 mg/day); venlafaxine (75–225 mg/day) and pregabalin (300–450 mg/day). Resource use and costs were obtained from 4,000 randomized hospital records from the Social Security Mexican Institute (IMSS). Costs included outpatient and inpatient services, drug, procedures, etc. The model was calibrated. Probabilistic sensitivity analyses were performed employing bootstrapping techniques and acceptability curves were constructed. **RESULTS:** The highest percentage of patients with complete response to the HAM-A scale during the follow-up period was obtained by pregabalin (39.8%; CI95% 38.5%–41.1%), followed by venlafaxine (22.6%; CI95% 21.9%–23.4%) and paroxetine (16.5%; CI95% 16.0%–17.0%). Regarding the CGI-I the highest percentage for complete response was for pregabalin (35.3%; CI95% 34.2%–36.5%); followed by venlafaxine (28.8%; CI95% 27.8%–29.7%) and paroxetine (16.6%; CI95% 16.1%–17.2%). The annual expected mean costs per patient were US\$1,893.1 (US\$1,830.7–US\$1,955.4), US\$2,001.2 (US\$1,935.3–US\$2,067.2) and US\$955.1 (US\$923.6–US\$986.5). The ICER for pregabalin vs. paroxetine (baseline) was US\$4019.7 (US\$3887.3–US\$4153.7) for HAM-A and US\$5017.9 (US\$4852.6–US\$5183.2) for CGI-I. Second-order Monte Carlo sensitivity analyses showed that pregabalin was a cost-effective therapy ( $p < 0.05$ ). **CONCLUSIONS:** Pregabalin showed to be a cost-effective therapy due to its higher efficacy response in the management of GAD.

PMH24

#### PHARMACOECONOMIC EVALUATION OF PHARMACOLOGICAL INTERVENTIONS IN GENERALIZED ANXIETY DISORDERS (GAD) IN MEXICO

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**OBJECTIVES:** Recognition and understanding of generalized anxiety disorder (GAD) have expanded in recent years. GAD is associated with high use of health care resources, predominantly primary care, and its economic burden on society is considerable. The objective of this study was to assess the cost-effectiveness of current treatments for GAD from the payer's perspective. **METHODS:** We developed a microsimulation model to estimate costs and effectiveness during a time horizon of 12 weeks. Effectiveness was assumed as the percentage of patients with complete response at the end of the follow-up period using the Hamilton Anxiety Rating Scale (HAM-A) –over 50% reduction related to baseline score– and Quality Adjusted Life Years